

I CLAIM:

1 1. An electronic circuit, comprising:
2 circuit elements arranged in an array, said circuit elements being alterable in
3 response to data stored therein and configured to shift data therebetween; and
4 a strobe line electrically coupled to ones of said circuit elements constituting a
5 set to provide thereto a strobe signal to cause said ones of said circuit elements in said set to
6 shift the data to ones of said circuit elements outside said set, said set comprising at least two
7 of said circuit elements positioned diagonally adjacent one another in the array.

1 2. The electronic circuit of Claim 1, wherein said set additionally comprises ones
2 of said circuit elements positioned orthogonally-adjacent in the array and ones of said circuit
3 elements positioned diagonally-adjacent in the array.

1 3. The electronic circuit of Claim 2, wherein said ones of said circuit elements
2 positioned orthogonally-adjacent in the array number more than two.

1 4. The electronic circuit of Claim 2, wherein said strobe line is electrically
2 coupled to a first one and a second one of said circuit elements, said first one and said second
3 one of said circuit elements being horizontally-adjacent.

1 5. The electronic circuit of Claim 4, wherein said strobe line is additionally
2 electrically coupled to a third one of said circuit elements diagonally-adjacent said second
3 one of said circuit elements.

1 6. The electronic circuit of Claim 5, wherein said strobe line is additionally
2 electrically coupled to a fourth one of said circuit elements horizontally-adjacent said third
3 one of said circuit elements.

1 7. The electronic circuit of Claim 1, wherein said circuit elements are arranged in
2 rows and columns.

1 8. The electronic circuit of Claim 7, wherein said circuit elements are configured
2 to shift data bi-directionally between orthogonally-located ones of said circuit elements.

1 9. The electronic circuit of Claim 1, further comprising:
2 a buffer connected to at least one end of the array of said circuit elements to
3 provide the data to said circuit elements.

1 10. The electronic circuit of Claim 1, wherein said circuit elements are light
2 modulation elements, said light modulation elements including:
3 memory elements configured to store the data and shift the data therebetween;
4 and
5 pixel controllers configured to alter the state of respective ones of said light
6 modulation elements in response to the data stored in respective ones of the memory
7 elements.

1 11. The electronic circuit of Claim 10, wherein each of said memory elements
2 further includes an output node electrically coupled to said respective pixel controller and to
3 an input node of an additional one of said memory elements.

1 12. The electronic circuit of Claim 11, wherein said light modulation elements
2 comprise liquid crystal material.

1 13. The electronic circuit of Claim 12, wherein:
2 the pixel controllers include pixel electrodes connected to receive the data
3 stored in said respective memory elements, and
4 said light modulation elements collectively comprise a common electrode
5 connected to receive a common electrode signal.

1 14. The electronic circuit of Claim 10, wherein:
2 said light modulation elements additionally include micromirrors, and
3 the pixel controllers comprise electromechanical devices configured to control
4 the state of said respective ones of said micromirrors in response to the data stored in
5 respective ones of said memory elements.

1 15. The electronic circuit of Claim 1, wherein:
2 said electronic circuit additionally comprises additional strobe lines; and
3 said strobe lines are configured in a first pattern covering a first portion of said
4 circuit elements and in a second pattern covering a second portion of said circuit elements,
5 the second pattern mirroring the first pattern.

1 16. The electronic circuit of Claim 1, wherein said electronic circuit additionally
2 comprises:
3 additional strobe lines; and
4 a shift register electrically connected to said strobe lines to apply strobe
5 signals sequentially thereto.

1 17. The electronic circuit of Claim 16, wherein said shift register implements a
2 ripple clock.

1 18. A method for performing photolithography, said method comprising:

2 providing an array of light modulation elements, said array comprising strobe
3 lines electrically coupled to respective sets of said light modulation elements, at least one of
4 said sets comprising ones of the light modulation elements positioned diagonally adjacent one
5 another in said array;

6 loading data representing an image into said array;

7 altering ones of the light modulation elements in response to said data to
8 transfer an instance of the image onto a substrate;

9 applying strobe signals to said strobe lines to shift said data between said light
10 modulation elements;

11 altering ones of the light modulation elements in response to said data shifted
12 thereinto to transfer another instance of the image onto the substrate.

1 19. The method of Claim 18, wherein each said altering further comprises:

2 applying a voltage in response to said data to the change optical characteristics
3 of the light modulation elements.

1 20. The method of Claim 18, wherein said applying further comprises:

2 utilizing a ripple clock to control the timing of said applying.

1 21. The method of Claim 18, wherein said at least one of said sets additionally

2 comprises ones of said light modulation elements positioned orthogonally-adjacent in said

3 array and ones of said light modulation elements positioned diagonally-adjacent in said array.

1 22. The method of Claim 18, wherein said light modulation elements are arranged
2 in said array in rows and columns, and wherein said applying further comprises:
3 applying a first strobe signal to first ones of said light modulation elements in
4 a first row;
5 in response to said first strobe signal, shifting the data out of said first ones of
6 said light modulation elements in said first row;
7 applying a second strobe signal to second ones of said light modulation
8 elements in said first row and to first ones of said light modulation elements in a second row,
9 adjacent said first ones of said light modulation elements in said first row;
10 in response to said second strobe signal, shifting the data from said first ones
11 of said light modulation elements in said second row to said first ones of said light
12 modulation elements in said first row; and
13 in response to said second strobe signal, shifting the data out of said second
14 ones of said light modulation elements in said first row.